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ABSTRACT

The author asserts that for many types of learning disabled students, integration with regular class students is desirable, and that a comprehensive analysis of the educational service delivery system is needed to achieve this goal. Disadvantages of the special class arrangement are described in terms of cost benefit, psychological growth of the separated student, and social experiences of the regular student. Necessary changes in the regular education system are examined in terms of six considerations: the regular classroom teacher's training and expertise, the pupil-teacher ratio, the degree to which individualized instruction is promoted, the degree of student independence, the organizational and policy issues affecting classroom practices, and the overall goals of the educational system. An intervention model based on a systems analysis approach is presented. (CL)

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Delivery of Educational Services For the Learning Disabled: A Systematic Approach

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Abstract

The development of educational programs for the learning disabled student has focused on the identification and remediation of these problems (Frierson & Barbe, 1967; Sapir & Nitzburg, 1973). Identification has followed a medical diagnosis (e.g. Dyslexia, Dysgraphia, Minimal Brain Dysfunction) or an educational-psychological assessment stressing perceptual-motor or cognitive malfunction. While there are significant differences between these approaches, remedial programs have often followed a common model of separation from non-learning disabled peers and "clinical" teaching within a special education context. More recently, this separation of "regular" and "special" education students has been questioned (Wolfensberger, 1970) and programs of integration, or "mainstreaming," have been developed. The efficacy of these programs has not, as yet, been reliably demonstrated.

The purpose of this paper will be to suggest that the integration of many categories of learning disabled students is desirable and that, in order to accomplish this end, a more comprehensive analysis of the delivery of educational services is required (Gordon, 1973). More specifically, the suggestion is be made that, in order to educate learning disabled students in the regular school system, there must be changes in both the identification and the remediation procedures currently utilized for all students and that the regular system of education, as well, must be modified in order to accommodate these "special" students within the mainstream.

The arguement for integration is developed in terms of a) the psychological advantages of integration for the individual learning disabled

student, b) the social advantages of integration for the non-learning disabled student and c) the advantages derived from a cost-benefit analysis of the delivery of educational services.

The need for a systematic approach to the delivery of services will be discussed in terms of a) the level of training and expertise typical of the regular classroom teacher, b) the teacher-pupil ratios, c) the degree to which the curriculum and materials allow for individualization of instruction, d) the degree to which students operate independently in their daily activities, e) the organizational and policy issues which impinge upon the classroom and f) the goals, implicit or explicit, of the educational system.

Finally, a model for intervention based on the systematic analysis of education service delivery and program development shall be presented as an initial step in the integration of learning disabled students into the educational mainstream.

The patterns of growth characteristic of educational systems seem to follow those patterns familiar to students of development. Initially, structures are tightly knit into a relatively undifferentiated mass. Nineteenth century North American education was conducted in one-room school houses with little segregation of students according to age or ability. Population explosions and urbanism led to a differentiation of the educational corpus into a number of parts. Students were separated according to age, sex, geographical location, race and, finally, abilities. Teachers were divided according to curriculum specialties, age of their students and expertise. Administrative structures began to have impressive labels such as superintendents of high schools, junior high schools, elementary schools, directors of pupil personnel services, guidance and special education and teachers of the "normal" student, the physically impaired and the socially-emotionally handicapped. In short, education grew from the status of a "mom-and-pop-store" to big business with all of the advantages and disadvantages that size and sophistication can command (Westby-Gibson, 1965). For the most part, we are now experiencing a state of organizational development that can be described as highly differentiated with parts isolated from each other by administrative and additudinal chasms. Such a developmental pattern is typically followed by an integration of parts which results in a more effective functioning. It is to such a future that this paper is addressed.

A review of the literature on learning disabilities reveals an almost exclusive focus on identification and remediation for students who demonstrate difficulties in acquiring academic skills. Minimal attention seems to have been devoted to the process of the delivery of these services. This situation has led to a number of problems in the execution and planning of programs. For

example, a school board may set criteria for the identification of the learning disabled, yet those responsible for the education of a particular student may ask: How long is the waiting list to get testing which would show that the student qualifies for special help? Is the testing going to be a reflection of the professional inadequacies of the teacher or the discovery of documentable learning disabilities? Will the out-of-the-classroom examination reflect how the student performs on a daily basis? How will the student respond to being identified, how will the parents respond? If the student is able to acquire a label, such as learning disabled, will remedial services be helpful? The list is illustrative, not exhaustive, and indicates the range and intensity of issues which must be confronted if services are to be delivered effectively.

While identification and remediation appear to be the main foci of the published literature, there is a considerable amount of variation in the approaches to these problems (Frierson & Barbe, 1967; Sapir & Nitzburg, 1973). Thus, treatment programs tend to emphasize dysfunctions of the central nervous system, the student "as a person," the teaching techniques, the teacher, the materials and the curriculum or the social system within which the educational process takes place. However, regardless of medical diagnosis, psychoeducational or behavioral assessment, remedial programs tend to follow the model of separation of the "learning disabled student" for "non-learning disabled peers," a practice questioned by Wolfensberger (1970). Thus, a common treatment format is persued independent of the significant variation between students.

This paper will suggest that, for many categories of learning disabled students, "regular student status" is desirable and that, in order to accomplish this end, a more comprehensive analysis of the delivery of educational services

is required (Gordon, 1973). More specifically, the argument will be made that, in order to educate learning disabled students in the "regular" classroom, there must be changes in both the identification and remediation procedures and that the "regular" system of education must be modified in order to accommodate these "special" students.

Historically, the learning disabled student was always a part of the "regular" classroom and, while it would be impossible to document their treatment, it would not be unreasonable to assume that these were the students who were labelled underachievers, emotionally disturbed, brain damaged or just plain lazy. The developments in the field that led to the identification of specific learning disabilities (Kirk & Bateman, 1962) prompted such innovations as special schools, special classes within regular schools, "free-flow" teaching and tutoring. These developments, in turn, must certainly have contributed to a decrement in the rate of academic casualties such as drop-outs, failures, behavior and emotional problems and "being given up on." On the other hand, a whole new division of the academic enterprise has begun to take shape in the form of special education services which present another system with which the schools have to interface. In fact, Bettleheim (1958) pointed out that racial segregation could be replaced with ability segregation thus perpetuating an unacceptable state of affairs. Quebec's example is instructive. During the academic year, 1967 - 1968, 1.57% of the elementary and high school population were registered in special education programs. By 1975 - 1976, 6.81% of the students were registered in special education, an increment in the rate by a factor four and a third! In the period between 1972 - 1973 and 1975 - 1976, there was a 16.15% rise in special education registrations despite a decrease

in the school population over that period of 9.78%. In fact, it is predicted that this rate of growth will lead to an educational service delivery system in 1984 that would have 30% of the students registered in special education (La Fédération des Commissions Scholaires Catholiques du Quebec, 1976). The question is whether these developments, emanating from a genuine concern for the education of students, might not lead to a situation where, in fact, two separate (and non-equal) systems of education compete, side-by-side, for tax dollars, status and development.

Paradoxically, again, this focus on the learning disabled and "special education" student serves to highlight the individual differences in learning styles that are demonstrated by all students. The logical conclusion might be to develop an educational system where 100% of the students would be enrolled in programs that would respond to their individual needs.

In broad terms, there are three service delivery alternatives; these are described in table 1. First, there could be two separate systems

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Insert table 1 about here

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of education: special and regular. This would, at the outset, allow more individual attention to "special" students yet, it would also lead to a duplication of services in those areas that are not crucial to learning problems, e.g. space, personnel and administrative structures. Both students and teachers would have to adopt separate identities and relationships; cumulative records indicating these "specialnesses" might effect future job applications, credit ratings, entry into higher education and certain

social groups. It would also allow the "regular" student to see only the "normal" part of human experience thus limiting opportunities to learn how to relate to a more heterogenous group of individuals.

Second, there is the "mixed system" where the learning disabled students attend their regular schools but receive instruction in special classes or in "free-flow" activities. This minimizes the problems of duplication but dramatizes the separate identities of the students. Even at the primary level, students are very aware of the pecking order and tend to behave accordingly. Again, the opportunity to learn how to function in a heterogenous group is minimized while the opportunity for the "regular" student to devalue the others is maximized.

Third, there is the "integrated system" where the learning disabled student is a real part of the regular classroom, receives all instruction there and is treated in no significantly different way than the rest of the class. This eliminates duplication of services and introduces an identity with a "home room" where all of the students are given special attention, i.e. significant differences are permitted within a common frame of reference.

At this point, one might ask: "If there are advantages to an integrated system, how can it possibly be made to work? Are there no real problems that mitigate against this development? For example, wouldn't teachers balk at the idea that they would have to maintain these 'problem' students within their classrooms? Wouldn't the parents of the non-learning disabled students complain that the quality of education was going to be compromised by mainstreaming? Would it not be more expensive to provide

this type of educational service? For example, wouldn't teacher-pupil ratios need to be reduced? Is there not a point of diminishing returns to the individualization of instruction? What will happen to the identity of the teacher? Of the students? of the administrators?"

Clearly, these and other questions are valid, yet the answers are not simple. First, the issues should be divided into those which relate to the introduction of mainstreaming and to those which relate to the maintenance of an individualized system. Second, there are crucial factors which must be identified in order to deal with the complex problem of individualized services. Third, it must be recognized that the answers to these questions are empirical and will, in the final analysis, be resolved by research evidence and not by the biases and inclinations of the planners.

Level of training and expertise of the classroom teacher

The classroom teacher is probably the most undervalued member of the education team. Teaching is referred to as a profession (Westby-Gibson, 1965) yet, relative to other professionals, teachers have the least amount of training, the smallest financial reward and the lowest status. While law and medicine require a bachelor's degree before entry into training, education allows admission into professional degree programs directly from high school. Other professionals, indeed many skilled workers, are required to have extensive experience in simulated or apprenticeship situations with close supervision by senior personnel. Teachers must make-do with limited pre-professional experience and often spotty supervision. Other professions allow, indeed insist upon, a certain amount of modelling by experts in the field and provide such forums as the court room, the operating theatre or the case conference as vehicles for this form of instruction. Teachers receive a minimum of formal modelling

and must rely, in many cases, on the memory of exceptional teachers that they might have encountered in their own education. In the past year, the average income of Canadian doctors and lawyers was over $40,000.00. Teachers with advanced degrees and substantial experience would have done well to have earned half of that. A final note to the devaluation of the classroom teacher is the sexist divisions that become apparant when one enters the coffee room in a typical school. The lower status positions seem to be filled, primarily, by females. Administrative and other high status jobs seem to have a disproportionate amount of men. In this way the classroom teacher is in the position of being, not one-down, but, "two-down" in terms of the amount of power and influence presently available to the social group with which the teacher is identified.

In short, there is a good deal of justification in the non-uncommon complaint that the "special" child should be "placed" because the classroom teacher has neither the time, nor the skill, nor the self-image as one who can deal with a significant amount of heterogeneity in the classroom. Teachers deal with large numbers of students who are expected to learn academic skills and become mature, self-motivated human beings. On the other hand, teachers receive little or no training in group work, the process of learning (as opposed to the technology of teaching), organizational principles or human development.

The good, motivated classroom teacher becomes a prime candidate for administrative posts or advanced training which often results in the removal of an effective professional from the regular classroom. In fact, what has been created is a system of service delivery that does not tap the potential of the classroom situation and functions in a manner that makes us look outside the classroom when "problems" arise.

The pupil-teacher ratio

This is both a hot topic and red herring. The heat is generated by friction between those who see quality of education in terms of the kind of personal attention that a teacher can afford to a student and those who have to pay for it. The red herring has to do with the traditional way in which public instruction is usually organized.

The determination of pupil-teacher ratios is extremely arbitrary and is usually based on organizational convenience rather than documented exigencies. For example, the elementary school classroom has a certain ratio which tends to change as the student enters high school, but not drastically. When a student enters college the ratios of students to teachers take quantum leaps, from perhaps thirty to three hundred or even a thousand students per classroom. The age at which this dramatic increase occurs as anchored in laws which determine the length of compulsory education and minimum age requirements to university entrance, not empirically derived values. The issue here is that the notion of how many students a teacher can effectively relate to at a given point of time is related to a number of factors that cannot at this time be written into formal regulations. The factors of concern are the teacher, the pupils, the subject matter and the resources that are available. Some teachers do better with large group of students, some do better with small ones. Some teachers are more comfortable with a continuous and direct contact with their students, some have comfort with students working on their own. Some students are able to learn mostly from a qualified teacher in a one-to-one or small group situation. Some students are able to learn mostly from a qualified teacher in a one-to-one or small group situation. Some students are able to learn mostly on their own,

or with the help of peer tutors. Some subject matter can be acquired with relatively little attention by the teacher. For example, programmed materials and computer assisted instruction have been helpful in teaching such diverse topics as elementary mathematics to graduate level anatomy. On the other hand, it would be difficult to imagine how a program or a machine could teach interpersonal skills or appreciation of the arts.

Thus, there are a number of issues to be systematically investigated in order to lead to an organization of educational service which would make optimum use of the human resources.

The degree to which the curriculum and materials allow for individualization of instruction

At first glance, this is a simple issue. Students whose learning style requires individual attention cannot survive the lock-step exigencies of a non-individualized system. The obvious solution would be to provide a variety of materials that would increase the probability of a "fit" between the students and the materials. This may, however, lead to an unnecessary investment in hardware and an uneven balance between investments in different students. A close analysis of the situation may be helpful in articulating some of the key issues. For example, a distinction may be made between what is learned and the rate of learning.

Insert table 2 about here

The table two indicates the major possibilities to individualization. There are those students who are able to learn using the same materials and

curriculum as the "regular" students, yet have difficulty keeping up with the speed at which the others learn. Others are able to learn as quickly as their peers but cannot learn well with the materials that are used by their classmates. Still others can learn but require both an individualization in both the rate of learning as well as in the materials or curriculum that are employed. The question of "who is regular" now takes on a new dimension.

This division of the factors which impinge upon program development raises a question about the academic goals, i.e. what are the minimum requirements that have to be attained in order for a student to receive a graduation diploma. The usual grading system is anchored to a time interval of so many days per year and so many years per "degree of diploma." It may be argued that some students may be able to fulfill the "degree requirements" in one-half the time that is usually available while others need one-and-one-half the amount of time to attain the same standard. Such questions need to be raised in order to make sense out of the individualization issue.

Thus, individualization is more than a matter of curriculum and materials but includes the organization and policies with which they are delivered.

<u>The degree to which students are able to operate independently in their daily activities</u>

The student is one of the cornerstones of the educational organization. Historically, children were conceptualized as little adults who needed to be nurtured and cared for until it became time for them to take responsibilities for their own actions. This point of view is reflected in the laws that relate to children (e.g. child labor laws), the limitations placed upon minors in their

rights to act of their own accord and the organizational structures, such as schools, which tend to keep them dependent upon adult direction and motivation. These assumptions have been seriously challenged by the following data. Research in cognitive development over the last thirty years indicates that children are more than little adults. They perceive the world differently, they think differently and their morals are different from those of adults. Research in the development of independence indicates that very young children are able to manage their own affairs, use of time and interpersonal relationships with a minimum of adult input. For example, Gingerich et al. (1976) report that first grade students were able to work on their own for up to a week in a single subject area. Similar findings, under less tightly controlled conditions have been reported by Kent, Spears and Wener, (1975) where grade one and grade two students have been able to handle week-long contracts in all subject areas. Thus, if students, even at the youngest grade level, are able to function relatively independently of their teachers, it may be possible to develop this skill as they grow up so that there is more time available for peer tutoring and one-to-one or small group involvement of the classroom teacher.

Organizational and policy issues which impinge upon the classroom

Organizations, like all systems, can be described in terms of their flexibility or rigidity. We are likely to feel positively towards those systems that fall somewhere in the middle of the possible extremes and a close examination of those elements may be instructive.

Classrooms, and schools themselves, have three major organizational structures that determine a good deal of what is possible, what is probable and what is unthinkable. These are outlined in table 3 so that the categories

Insert table 3 about here

of academic, social and physical organization are ranked on bipolar scales. The initial level of classroom organization is characterized by a high level of structuring by the teacher and a low level by the student. The teacher determines what will be learned, how it will be learned and the rate of learning. The teacher makes rules and backs them up with concrete rewards and punishments, e.g. "if you leave the room without permission, you may have to stay in at recess." With respect to the physical arrangement, the classroom layout is convenient to the teacher so that there is easy access to all students.

As the level of organization of the classroom develops, so might the degree to which control switches from the teacher to the student. The ultimate example of this might be the graduate student who develops a mentor-relationship with an advisor where the understanding is that the student will determine the nature of the learning, as well as the conditions and physical locations by which the learning will take place.

In this way, it becomes evident that there are a number of possibilities for innovation on the part of the classroom teacher. There are also, a variety of forces which mitigate against change. For example, if a grade three teacher conducts a classroom on an independent study basis, what happens to those students when they go to the next grade where the teacher likes to have all the students working in the same way? What is it like for the students who enter that classroom having graduated from a class where independence was not a priority? What are the implications for interpersonal relations in the teacher's

room when there are large and often incompatible differences between the ways in which the different classrooms are organized. Similarly, there are limitations to the degree of freedom available to individualized curricula and materials since these are usually distributed from a central buying source, and central buying sources find it to their advantage to buy in large quantities to take advantage of discounts.

Ruma (1974) provides a helpful model for conceptualizing those elements of an organization that are involved in change. His model, outlined in table 4, facilitates answering questions about where to invest time and energy in instituting organizational change.

Insert table 4 about here

Quandrant I ". . . represents those parts of aspects of the organization which are currently functioning at an optimum level and are amenable to change when necessary and as indicated . . . Examples might be a building with room for expansion, or a board well trained in problem solving and willing to examine its own processes (Ruma, 1974, p.3)."

Quandrant II includes those ". . . aspects of the organization that are not working well (dysfunctional) but they are amenable to change. Typical entries in this quandrant are the organizational norms for reward and punishment, modes of communication, and allocation of job functions and responsibilities (Ruma, 1974, p.4)." The change-overs that occur with a new principal, significant alternations in workloads or finanacial crises included by salary scales are characteristic of quandrant II issues in public schools.

"Quandrant III often represents stopgap measures or behaviors described years ago by Dunker as 'functional fixedness.' These ways of dealing with problems, though still effective, will not long remain so. Examples are 'Acting Director,' temporary buildings, or sophisticated technology, functional only for a specific market (Ruma, 1974, p.4)." Schools may find themselves in quandrant three situations when substitute teachers are often necessary, school personnel policies are run by the Peter Principle or when major improvements continually wait upon new sources of funding.

"Quandrant IV is the area of organizational disaster. It includes those aspects which are not effective and are at present impossible to change (Ruma, 1974, p.4)." Organizational rigidity is often the culprit in this case and may include a school program being "locked-in" by long-term personnel contracts that maintain incompetent people in positions of responsibility, inadequate space with no funds available to move or renovate, or a neighborhood that is so impoverished that education takes a back-seat to the daily business of survival.

Policy issues may be assessed in the same manner, i.e. how they affect the physical, social and academic aspects of the school's organization and how they fit into a model of amenability to change. Some specific examples might include the decision as to whether "bright" students might accelerate ahead of where they are targeted to be according to their chronological age, the degree to which "non-teachers" are allowed to teach or the type of information that is to be communicated to parents.

The goals, implicit or explicit, of the educational system

This is another controversial issue and it is rather easy to get

embroiled in one point of view or another. While no discussion of goals is likely to be value-free, the purpose here is to appreciate how these goals can effect a classroom situation. One illustration of this is the development of separate special education programs. Given this goal, a certain structure is bound to develop. Space is put aside, qualified teachers are employed (often at a salary that is higher than that of the regular classroom teacher) and materials are ordered. As time goes on, a considerable investment is made and a certain recognition is developed in the community. The question now arises: What to do with all of the teachers, space, materials and good-will that has been generated, if there is a move towards integration of these students into regular classrooms?

Another example may be found in the policy relating to the kind of education that should be delivered to the learning disabled student. Suppose that these programs had been consistent with theory and technology X and then, as a result of new policy-making personnel or research data or community pressure or whatever, policies are changed so that programs are based on theory and technology Y. In this case, there is a significant re-training problem for the teachers both in terms of the skills that they are expected to demonstrate and in terms of their attitudes and feelings towards their work.

In short, then, policy decisions can have significant consequences for the education of all students and these implications must be taken into account at the planning stage.

Intervention Model

The presentation of a model for intervention is almost incongruous with the preceding discussion. It was previously argued that educational systems are developing organizations with many parts. Each of the parts may

vary in one of a number of ways so that the number of possible configurations is practically infinite. Thus, it would be unrealistic to develop a specific intervention model that could be effective for all schools.

The purpose, here, is to articulate a meta-model that incorporates redundant patterns to be found in most schools so that specific plans of action may be developed by playing variations on a common theme.[1] Table 5 provides a schema with which the problems may be constructed.

Insert table 5 about here

The rows list those factors that are common to all schools; the columns divide the issues into those which are related to an introduction of a change in the system and those which are concerned with the maintenance of the change once it has been successfully implemented.

Teachers

The placement of the teachers at the top of the list is not accidental. The classroom teachers are the most important element in the whole system; they are the interface between the entire educational enterprise and the student. Thus, teachers should receive a number of considerations prior to, as well as in the process of, the introduction of learning disabled students to their classroom. First, there are basic conditions of employment that need to be assured. Herzberg, Mausner & Snyderman (1959) have drawn the distinction

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[1] For a more complete discussion of meta-models see Qatzlawick, Beavin & Jackson (1967) and Watzlawick, Weakland & Fisch (1974)

between those needs in an employment situation that are essential and those which provide added incentives in terms of job enrichment. The essentials include working conditions, financial reward and job security. These must be available, at reasonable levels, before any innovation is to be implemented. Second, teachers who are unfamiliar with learning disabled students, individualization and mainstreaming need a comprehensive orientation. The success of this program will probably vary with the degree to which teachers are able to come in contact with a system that is already operating efficiently. This may mean setting up demonstration classrooms or schools or providing visits to other school systems.

Third, there must be a significant amount of administrative support that is visible to all members of the school community. It is interesting to note that, in a study by Steck (1975) which investigated the implementation of a Teacher Effectiveness Training program (T.E.T.), the conclusion was reached that

> Although T.E.T., as presented to the subjects in the experimental group, did not make a significant difference, there was a measurable impact on the total sample (combined experimental and control groups). This change, it is speculated, was caused by the messages generated by the assessment instruments and by the T.E.T., i.e., subjects responded to what was expected from a high authority source . . . when the subjects got the message from the superintendent, central office and principals that it was desirable to be more flexible and open, and less authoritarian and dogmatic, they responded accordingly on those instruments that were more easily manipulated (P. 87).

In the final analysis, it is the administration of the school which is in the best position to value the teacher by enriching the job with time and resources for professional development.

Fourth, there are the twin issues of training and re-training, a set of processes that may be guided by the maxim: "If you are going to do something, do it right or don't do it at all." Inadequate training devalues the teacher's sense of worth and competence with undesirable outcomes occuring to both the students and the work relationships of the staff. A longer apprenticeship period with close and expert supervision and modelling allow for a vertical integration in education. The university or other teacher training establishment typically keeps, or is kept at, a respectful distance from the public school. This isolation may have been functional at one point in time, but, to the extent that teaching skills require practice to achieve a satisfactory level of competence, an extensive experience in a real classroom cannot be excluded. This is particularly true for skills in group dynamics, teaching techniques and classroom management.

Fifth, all innovations require a period of "debugging" and classroom innovation is no exception. It is here that the generality of the meta-model falls down since it is only in the actual situation that an effective "fit" can be engineered between the teacher and the rest of the system.

The factors that maintain teachers' involvement are likely to vary with the level of sophistication and support achieved in the introductory stages. There are limits, however, to the efficacy of accommodations to the teacher. At some point, it will be essential that those in direct contact with the students have a sense of ownership of the educational process. The necessary conditions may be applied in terms of training, professional development opportunities and resources, yet, in the final analysis, it will probably be the gut-feeling of "doing the right thing" that will allow teachers to

persue a relatively difficult individualized program.

Students

The introduction of individualized programming and mainstreaming is a relatively easy task for students just as the present arrangement is relatively difficult. Children are born and brought up in a "mainstream" system where all different kinds of people live in the same house and where a significant amount of variation between those people is not only tolerated but accepted. Children are very familiar with individualization: they are accustomed to going to the bathroom when they need to, to taking a break when their rhythm dictates and to modifying their games to accommodate to the skills of their friends and relatives. Since it is the artificial structure of the school that is foreign to children, a more natural, self-paced environment would probably be a return to what they have found to be comfortable.

While the ideas of individualization and mainstreaming may not provide great obstacles to students, the conditioning received by previous school experience may complicate the matter. The divisions of students into age and ability groups creates norms and values which are real in their perception, if not in their creation. Thus, re-establishing some basic orientations, might become a major focus. This may be accomplished in at least three ways. First, students need an orientation similar to that of their teachers. They would benefit from seeing a model classroom, from role playing a more independent mode of functioning in their own rooms and receiving a significant amount of reinforcement for their participation. Second, students need to learn independence skills a step-at-a-time, a process that might begin in kindergarten. This would include social skill training as a classroom activity, the use of problem solving techniques such as those described by Meichenbaum & Goodman (1971) and planning

for themselves. Third, students, too, should come to have a sense of ownership of their own education. If the student is a good learner, there are certain responsibilities and obligations that might be involved in terms of persuing their intellectual development or helping a less-good-learner progress in this area. If the student is not a good learner, there are also responsibilities and obligations that accrue. One of them is to be able to respond to the fact that they have difficulty in accomplishing school-related tasks. Another is that, assuming that the classroom accommodates for individual differences, this student is also involved in persuing intellectual development and helping others in this area.

Maintenance of student behavior depends on a number of factors, some of which are related to the school and others which are not. While a well-developed program and a sense of academic ownership will go a long way in facilitating intellectual development, it is also true that growing up is not an easy task so that counselling, medical and social services should also be included.

Administrators

Managerial models, ranging from totalitarian, militaristic to laissez-faire, democratic, have been proposed for the administration of all kinds of organizations. Managerial styles and techniques often vary with the particular manager, the history of the organization and the zeitgeist of the time. Meta-model planning would suggest an examination of these issues prior to the introduction of new programs. Some organizations can adapt very easily, others may nver really change. The question is whether or not there is a fit between the proposed innovation and the system as it exists and, in this case, the

organizational model presented by Ruma (1974) is useful. The suggestions about mainstreaming and individualization proposed at the beginning of this paper need such an examination, as well. For example, it would be foolhardy to initiate such a program in a school system where most of the staff were clearly opposed to it and also had strong job security.

The maintenance of an individualized, mainstreaming system is ultimately the responsibility of the administrator. He or she needs adequate orientation, training and resources so that the educational process may be appreciated as a complex system with many interconnected parts. The ability of the administrator to integrate the in a manner that results in a smooth and flexible operation depends partly on the managerial skills of the individual and partly on the type of system that is being managed. For example, professional development has been mentioend as an important factor in the maintenance of teacher involvement. This would be greatly enhanced by a reciprocal relationship with the university so that courses, workshops and seminars would be available to the public school teachers while university personnel would have easy access to neighborhood classrooms. In this way, education would be integrated vertically as well as horizontally and the administrator would have an effective means of maintaining the program.

In summary, the current attention to learning disabled students has focused primarily on the deficits of the learner and secondarily on the methods of instruction. This had led to a division of students into categories and the development of an alternate system of education, i.e. special education. This arrangement has a number of disadvantages in terms of cost-benefit, growth of the separated student and range of interpersonal experiences

of the "regular" student. The suggestion was made to integrate many of the special education students into the mainstream with the caution that this would involve modification in the "regular" classroom. Finally, problems to integration and their possible solutions were articulated in terms of a general systems analysis, from which, hopefully, more specific plans could be developed for each school and classroom.

Table 1

ALTERNATIVES FOR SPECIAL EDUCATION

	Separate	Mixed	Integrated
Cost-Benefit	Duplications	Reduced Duplications	Minimized Duplication
Identity and Group Affiliation	Separate Groups	In-group vs. Out-group	One group
Perspectives	Narrow Elitism	Intensified Separateness	Opportunity for Equal contact

Table 2

TIME (RATE) & COMPETENCY

	Fixed Time	Variable Time
Fixed Competency	"Regular"	"Special"
Variable Competency	"Special"	"Special"

Table 3

ORGANIZATION OF LEARNING

High Level of Structure by Teacher

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Low Level of Structure by Student

Academic	Social	Physical
One-to-one	Explicit rules and non-social control	High structure and proximate teacher
Small groups	Explicit rules and social control	High structure and distal teacher
Small group and independent study	Implicit rules and social control	Low structure and differentiation
Large groups	Implicit rules and self-control	School
Large groups and independent study		Community
Independent study		Universe

Low Level of Structure by Teacher

&

High Level of Structure by Student

Table 4

Organizational Model[1]

	Functional	Dysfunctional
Amenable to Change	QUANDRANT I "HEALTH"	QUANDRANT II TARGETS FOR CHANGE
Not Amenable to Change	QUANDRANT III STOPGAPS	QUANDRANT IV DISASTER AREA

[1]RUMA (1974 p.4)

Table 5

System Issues In Schools

	Introduction	Maintenance
Teachers	1. Conditions of employment 2. Orientation 3. Administrative support 4. Training and re-training 5. Debugging of innovation	1. Accommodations of the system 2. "Ownership" 3. Professional development
Students	1. Orientation 2. Independence 3. "Ownership" training	1. "Ownership" 2. Auxillary services
Administrators	1. Systems analysis 2. Orientation	1. Resources 2. Vertical integration of educational system

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